1.   A method for transferring data between a facility for altering data and a facility for receiving data including the steps of establishing a first data store for receiving the altered data, a second data store and a first table for recording the identification of changes in the first data store produced by the facility for altering data and a first of a plurality of operating modes during which the second data store receives data from the first data store according to the identified changes in the first table said method being characterized by:

A.   establishing a second table for recording the identification of changes in the first data store produced by the facility for altering data, and

B.   shifting operations to a second of a plurality of operating modes for copying data from the second data store to the receiving facility according to the changes in the second table identified at the time the second operating mode is established, which changes correspond to changes in the first data store since a prior shift to the second operating mode.

2.   A method as recited in claim 1 wherein transfers within the facilities occur as data blocks and wherein the first data store includes storage for diverse information about each data block, said method additionally establishing a

third table for recording an identification of changes and transferring the contents of the second table to the third table upon a shift to the second operating mode.

3. A method as recited in claim 1, wherein transfers within the facilities occur as data blocks and wherein a portion of the first data store contains information about changes to each data block, the contents of the first data store portion being transferred to the second table to provide initial identification information at the time of a shift to the second operating mode.

4. A method as recited in claim 3 additionally wherein data is transferred by copying, initial operations during the second operating mode initializing the second table and setting all data in a third table to a first state during a first iteration in a cascading session whereby said copying transfers all the data in the second data store to the data receiving facility

5. A method as recited in claim 1 wherein the facility for altering data is constituted by a host and a production storage facility wherein the host can issue a plurality of cascade commands and wherein the first data store receives data from the production storage facility on a track-by-

track basis, wherein said second data store and second table comprise an intermediate facility located at a site intermediate the site of the data altering facility and the site of the data receiving facility and wherein said method is further characterized by establishing a third table at the site of the intermediate facility that identify changes in the second data store whereby during the first operating mode in response to a first cascade command the second data store receives data from the first data store according to the changes recorded in the table and during the second operating mode in response to a second cascade command data is copied from the second data store to the data receiving facility according to the changes transferred to the third table from the second table at the time the second mode is established.

6. A method as recited in claim 5 wherein the first data store includes storage for diverse information about each track and the second table receives the diverse information.

7. A method as recited in claim 6 wherein the intermediate facility additionally includes control means responsive to iteratively generated first and second commands from the production storage facility for effecting a cascading

session during which the control means alternatingly and iteratively enables the first and second operating modes on a mutually exclusive basis.

8. A method as recited in claim 7 wherein during the first operating mode, on succeeding iterations, data alters in the first and second tables and during the second operating mode, on successive iterations, corresponding data from the second table transfers to the third table.

9. A method as recited in claim 6 additionally comprising the step of establishing a communications link between the second data store and each of the data altering and data receiving facilities.

10. A method as recited in claim 9 wherein the step of establishing the communications links establishes communications links with different characteristic bandwidths.

11. A method as recited in claim 9 wherein the step of establishing the communications links establishes a communications link to the data altering facility with a greater characteristic bandwidth than the communications link to the data receiving facility.

12. Apparatus for transferring data between a facility for altering data and a facility for receiving data wherein said apparatus comprises means for establishing a first data store for receiving the altered data, a second data store and a first table for recording the identification of changes in the first data store produced by the facility for altering data and means for defining a first of a plurality of operating modes during which the second data store receives data from the first data store according to the identified changes in the first table, said apparatus comprising:

    A.   a second table for recording the identification of changes in the first data store produced by the facility for altering data, and

    B.   means for shifting operations to a second of a plurality of operating modes for copying data from said second data store to the receiving facility according to the changes in said second table identified at the time the second operating mode is established, which changes correspond to changes in the first data store since a prior shift to the second operating mode.

13. Apparatus as recited in claim 12 wherein transfers within the facilities occur as data blocks and wherein the first data store includes storage for diverse information about each data block and a third table for recording an

identification of changes and transferring the contents of the second table to the third table upon a shift to the second operating mode.

14. Apparatus as recited in claim 12 wherein transfers within the facilities occur as data blocks and wherein a portion of the first data store contains information about changes to each data block, said apparatus including means for transferring the contents of the first data store portion to the second table to provide initial identification information at the time of a shift to the second operating mode.

15. Apparatus as recited in claim 14 wherein data is transferred by copying, initial operations during the second operating mode initializing the second table and setting all data in a third table to a first state during a first iteration in a cascading session whereby said copying transfers all the data in the second data store to the data receiving facility

16. Apparatus as recited in claim 12 wherein the facility for altering data is constituted by a host and a production storage facility wherein the host can issue a plurality of cascade commands and wherein the first data store receives data from the production storage facility on a track-by-track basis, wherein

said second data store and second table comprise an intermediate facility located at a site intermediate the site of the data altering facility and the site of the data receiving facility and wherein said apparatus further comprises a third table at the site of the intermediate facility that identifies changes in said second data store whereby during, the first operating mode in response to a first cascade command said second data store receives data from the first data store according to the changes recorded in the table and during the second operating mode in response to a second cascade command data is copied from said second data store to the data receiving facility according to the changes transferred to said third table from said second table at the time the second mode is established.

17. Apparatus as recited in claim 16 wherein the first data store includes storage for diverse information about each track and said second table includes a location that receives the diverse information.

18. Apparatus as recited in claim 17 wherein the intermediate facility additionally includes control means responsive to iteratively generated first and second commands from the production storage facility for effecting a cascading session during which the control means alternatingly and iteratively

enables the first and second operating modes on a mutually exclusive basis.

19. Apparatus as recited in claim 18 wherein during the first operating mode, on succeeding iterations, data alters in the first table and said second table and during the second operating mode, on successive iterations, corresponding data from said second table transfers to said third table.

20. Apparatus as recited in claim 19 additionally comprising communications links between said second data store and each of the data altering and data receiving facilities.

21. Apparatus as recited in claim 19 additionally comprising communications links between said second data store and each of said data altering and data recovery facilities, said communications links having different characteristic bandwidths.

22. Apparatus as recited in claim 21 wherein said communications link to the data altering facility has a greater characteristic bandwidth than said communications link to the data receiving facility.

23. Apparatus as recited in claim 20 wherein said communications link to the data altering facility has a greater characteristic

bandwidth than said communications link to the data receiving facility.